

REMARKS

This Amendment responds to the Final Office Action mailed March 3, 2009 in the above-identified application. The foregoing amendments are made in order to place the application in condition for allowance and do not raise new issues or require extensive consideration. Accordingly, entry of the Amendment and allowance of the application are respectfully requested.

Claims 1-38 are pending in the application. Claims 13-24 and 37 have been withdrawn from consideration. Claims 1 and 25 have been amended. Accordingly, claims 1-12, 25-36 and 38 are currently under consideration, with claims 1 and 25 being independent claims. The amendments to claim 1 find clear support in the original application at least at page 22, lines 8-18 and page 23, lines 13-15. The amendments to claim 25 find clear support in the original application at least at page 27, lines 17-20 and page 29, lines 7-16. No new matter has been added.

The Examiner has rejected claims 1, 2, 5, 11 and 36 under 35 U.S.C. §103(a) as unpatentable over Scribe (Article entitled: "Scribe: A Large-Scale and Decentralized Application-Level Multicast Infrastructure") in view of Feigenbaum et al. (U.S. 4,718,005) and Crockett et al. (U.S. 2003/0154243). Claims 3, 4 and 12 are rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al. and Crockett et al., further in view of Speakman et al. (U.S. 6,389,475). Claim 6 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al. and Crockett et al., further in view of Jonsson (U.S. 2003/0162499). Claim 7 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al., Crockett et al., and Jonsson, further in view of mail.yahoo.co.uk. Claim 8 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al., Crockett et al., and Jonsson, further in view of Novaes et al. (U.S. 2003/0012130). Claim 9 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al., Crockett et al., Jonsson and Novaes et al., further in view of Speakman et al. Claim 10 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al., Crockett et al., Jonsson, Novaes et al., and Speakman et al., further in view of Burbeck et al. (U.S. 7,143,139). Claims 25, 26, 27 and 38 are rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al. and O'Sullivan (Article entitled: "The Internet Multicast

Backbone”). Claim 28 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al., and O’Sullivan, further in view of Novaes et al. Claims 29 and 30 are rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al., O’Sullivan and Novaes et al., further in view of Stanko (U.S. 2005/0074126). Claim 31 is rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al., O’Sullivan, Novaes et al., and Stanko, further in view of Traversat et al. (U.S. 2002/0143855). Claims 32 and 35 are rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al. and O’Sullivan, further in view of Novaes et al. Claims 33 and 34 are rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Speakman et al. and O’Sullivan, further in view of Burbeck et al. The rejections are respectfully traversed in view of the amended claims.

The Scribe multicasting infrastructure relies on application level routing provided by overlay networks. The Scribe multicasting infrastructure is described at page 3, line 11 to page 4, line 8 of the present application.

Feigenbaum discloses techniques which permit data processing systems linked to nodes of a communication network to create and use alias names on a distributed basis, and thereby to sustain data communications between resources known by various names, and distributed throughout the network, without dependence on a central or master directory (Col. 1, lines 38-43). In discussing extension of name communications through nodal bridges and gateways, Feigenbaum describes topological restrictions on the transfer of requests across network boundaries (Col. 11, lines 14-58). In particular, Feigenbaum describes providing a “hop count” number with a communication to restrict its transfer across network boundaries. This number indicates the number of network boundaries which the communication may cross (Col. 11, lines 19-27).

Crockett describes a method and apparatus for registering a user in a group communication network, including a location server that maintains user location information (Paragraph 0048). Crockett states that the user location information may be the IP address of the client, regardless of whether the client is connected via wireless or wireline services (Paragraph 0096).

Speakman describes content-based filtering of multicast information. A set of sources that wishes to distribute information in different categories each associates a content descriptor

with messages containing information in those categories. A mapping server associates a multicast address and a content mask with each content descriptor so that network elements can distribute only those messages which are of interest to recipients in multicast distribution trees (Col. 1, lines 55–67). Speakman does not disclose or suggest joining a first multicast tree and joining a second multicast tree that includes a subset of the overlaying nodes in the first multicast tree, as claimed. Instead, Speakman describes a network where the nodes in the multicast tree perform content-based filtering of messages.

O’Sullivan describes the Internet multicast backbone and states that the multicast backbone is a cooperative voluntary effort, consisting of Internet service providers who route multicast traffic over their networks and end users who install multicast routers at their site (Background). O’Sullivan’s technique for participating is that a user simply opts out of the multicast backbone entirely if he does not wish to participate.

Applicants do not concur with the Examiner’s interpretation of claim 1 or the rejection of claim 1 and hereby reiterate the arguments set forth in the previous response filed December 3, 2008. Nonetheless, in order to advance prosecution of the application, claim 1 has been amended to recite that an intermediate node in a path from a subscriber node to the root node of the multicast tree forwards a subscription message only to a node identified by the node name as belonging to the first network region. The claimed method for multicast messaging on an overlay network provides path locality which ensures that when two nodes in the overlay network belong to the same network region, then any messages routed between those nodes will only traverse other nodes belonging to the same network region of the larger overlay network.

By contrast, Feigenbaum describes a message that is provided with a hop count that restricts transfer across network boundaries. The hop count indicates the number of network boundaries which the communication may cross (column 11, lines 19-27). Feigenbaum states that a zero hop count value prevents further forwarding so that messages crossing between B and C could not reenter A (column 11, lines 46-49). Applicant submits that adding a hop count to a message, as taught by Feigenbaum, is very different from an intermediate node forwarding a subscription message *only to a node identified by the node name as belonging to the first network region*, as recited by amended claim 1.

Scribe and Crockett do not provide the teachings that are lacking in Feigenbaum. For at least these reasons, amended claim 1 is clearly and patentably distinguished over Scribe in view of Feigenbaum and Crockett, and withdrawal of the rejection is respectfully requested.

Claims 2-12 and 36 depend from claim 1 and are patentable over the cited references for at least the same reasons as claim 1.

Applicants do not concur with the Examiner's interpretation of claim 25 or the rejection of claim 25 and hereby reiterate the arguments set forth in the previous response filed December 3, 2008. Nonetheless, in order to advance prosecution of the application, claim 25 has been amended to recite that the subset of an overlay nodes in the second multicast tree consists of the overlay nodes that are subscribers and the overlay nodes that voluntarily participate in message dissemination. Claim 25 has further been amended to specify that the overlay nodes in the second multicast tree disseminate message traffic independent of content.

The Examiner contends that Speakman teaches joining a second multicast tree that includes a subset of the overlay nodes in the first multicast tree and refers to column 3, lines 24-47 and column 5, lines 9-55 of Speakman. Applicant must respectfully disagree. The referenced sections of Speakman describe a content descriptor CD that specifies the content of the information being distributed. Speakman describes how the content descriptor CD is used to filter multicast information packets sent on the multicast tree. Packets are forwarded to nodes that have registered to receive content that matches the content descriptor.

Applicant submits that Speakman does not disclose or suggest joining a first multicast tree and joining a second multicast tree that includes a subset of the overlay nodes in the first multicast tree, as claimed. Instead, Speakman describes a single multicast tree where messages are forwarded to a subset of the nodes in the tree. However, the skilled person would not interpret Speakman as teaching that the subset of nodes which receive the packets according to the content descriptor CD defines a second multicast tree. Instead, a single multicast tree is used for routing of all messages. Furthermore, Speakman does not disclose or suggest a multicast tree where the overlay nodes in the multicast tree disseminate message traffic independent of content, as required by amended claim 25.

Scribe and O'Sullivan do not provide the teachings that are lacking in Speakman. For at least these reasons, amended claim 25 is clearly and patentably distinguished over Scribe in view of Speakman and O'Sullivan, and withdrawal of the rejection is respectfully requested.

Claims 26-35 and 38 depend from claim 25 and are patentable over the cited references for at least the same reasons as claim 25.

Since each of the dependent claims depends from an independent claim that is believed to be in condition for allowance, Applicant believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicant does not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor does the Applicant concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicant reserves the right to specifically address the patentability of the dependent claims in the future.

Based upon the above discussion, entry of the Amendment and allowance of the application are respectfully requested.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 23/2825 under Docket No. M1103.70235US00 from which the undersigned is authorized to draw.

Dated: June 3, 2009

Respectfully submitted,

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